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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,225	10/28/2003	Makoto Takeuchi	116-031812	5331

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EXAMINER	
STADLER, REBECCA M	
ART UNIT	**PAPER NUMBER**
1754	

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/695,225	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	Rebecca M. Stadler	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/897,726.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,310,762 to Okamura in view of USP 5,338,462 to Abe.

As to claims 1-5 and 7, Okamura discloses a carbon material that is activated to produce crystallites of graphite-like carbon having interlayer distances of 0.365 to 0.385 nm (see column 2, lines 17-21). Overlapping ranges is prima facie evidence of obviousness. See, e.g., In re Malagari, 499 F.2d 1297, 182 U.S.P.Q. 549 (CCPA 1974).

In example 1, column 7, Okamura discloses heat-treating petroleum coke at 750°C for 2 hours in ambient (dry) conditions. The heat-treated coke is then mixed with potassium

hydroxide and heat-treated at 800°C. The reference discloses that this carbonization process hinders the progress of activation, thereby limiting the BET specific surface area to about 300 m^2/g. The low surface area makes it possible for the activated carbon to be used in an electric double layer capacitor that has a large capacitance. Although Okamura discloses a specific surface area that is slightly higher than that claimed (270 m^2/g), it would have been obvious to one of ordinary skill in the art at the time the invention was made to decrease the specific surface area, since it has been held that discovering an optimum value or a result effective variable involved only routine skill in the art. See, e.g., In re Boesch, 617 F.2d 272, 205 U.S.P.Q. 215 (CCPA 1980). The artisan would have been motivated to decrease or optimize the specific surface area by the reasoned explanation that doing so will better allow for the activated carbon to be used in a capacitor having a large capacitance as suggested by Okamura.

Okamura is silent as to whether the alkali is removed. Regarding claim 2, Okamura '762 does not teach or suggest the additional heat treatment in a reducing atmosphere as recited in claim 2. However, Abe '462 does teach heat treatment of an already activated and washed carbon. Abe discloses an acid wash treatment to remove the impurities, followed by a washing step and a heat treatment step that is performed at 400°C – 1,000°C under a reducing atmosphere (see column 14, line 66 – column 15, line 3). It would have been obvious to one of ordinary skill in the art at the time of this invention to subject the activated carbon of Okumura to the washing and extra heat treatment step of Abe in order to produce an enhanced activated carbon as suggested by Abe.

As to claims 6, Okamura is silent regarding the relaxation times. However, the properties of the activated carbon and Okamura are so similar that the relaxation times would be expected to be the same.

Claims 1, and 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,310,762 to Okamura in view either of USP 3,770,625 to Walls or USP 4,392,004 to D'Sidocky.

As to claims 1-5 and 7, Okamura discloses a carbon material that is activated to produce crystallites of graphite-like carbon having interlayer distances of 0.365 to 0.385 nm (see column 2, lines 17-21). Overlapping ranges is prima facie evidence of obviousness. See, e.g., In re Malagari, 499 F.2d 1297, 182 U.S.P.Q. 549 (CCPA 1974).

In example 1, column 7, Okamura discloses heat-treating petroleum coke at 750°C for 2 hours in ambient (dry) conditions. The heat-treated coke is then mixed with potassium hydroxide and heat-treated at 800°C. The reference discloses that this carbonization process hinders the progress of activation, thereby limiting the BET specific surface area to about 300 m^2/g. The low surface area makes it possible for the activated carbon to be used in an electric double layer capacitor that has a large capacitance. Although Okamura discloses a specific surface area that is slightly higher than that claimed (270 m^2/g), it would have been obvious to one of ordinary skill in the art at the time the invention was made to decrease the specific surface area, since it has been held that discovering an optimum value or a result effective variable involved only routine skill in the art. See, e.g., In re Boesch, 617 F.2d 272, 205 U.S.P.Q. 215 (CCPA 1980). The artisan would have been motivated to decrease or optimize the specific surface area by the reasoned explanation that doing so will allow for the activated carbon to be used in a capacitor having a large capacitance as suggested by Okamura.

Okamura is silent as to whether the alkali is removed. However, '625 to Walls discloses treating an activated carbon with potassium hydroxide, followed by washing with water to remove the potassium hydroxide (see column 3, line 74 – column 4, line 9). D'Sidocky '004 teaches that an acid wash can be used to remove inorganic impurities, resulting in a non-alkaline activated carbon (see column 4, lines 2-5). It would have been obvious to one of ordinary skill in the art at the time of this invention to remove the alkali of Ukamura because the Walls and D'Sidocky teach that doing so is desirable.

As to claims 6, Okamura is silent regarding the relaxation times. However, the properties of the activated carbon and Okamura are so similar that the relaxation times would be expected to be the same.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over USP 6,310,762 to Okamura in view either of USP 3,770,625 to Walls or USP 4,392,004 to D'Sidocky, as applied to claim 1 above, and in further view of USP 5,338,462 to Abe.

Okamura does not disclose the extra heat treatment in a reducing atmosphere of the activated carbon. However, Abe '462 does teach heat treatment of an already activated and washed carbon. The heat treatment is performed at 400°C – 1,000°C under a reducing atmosphere (see column 14, line 66 – column 15, line 3). It would have been obvious to one of ordinary skill in the art at the time of this invention to subject the activated carbon of Okumura in view of either of Walls or D'Sidocky to the extra heat treatment step of Abe in order to produce an enhanced activated carbon as suggested by Abe.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rebecca M. Stadler whose telephone number is 571-272-5956.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

rms

COLLEEN P. COOKE
PRIMARY EXAMINER